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TITLE : MANUFACTURE OF GRANULAR COPPER FINE POWDER

ABSTRACT : PURPOSE: To obtain a granular copper fine powder having stable quality at a low cost and to extremely effectively use this powder for a raw material for powder metallurgical product and electronic parts, by executing electrolysis to the granular copper using a metallic copper as anode in sulfuric acid solution containing Ti^{3+} ion, reducing a Cu^{2+} ion eluted from the anode with a Ti^{3+} ion and precipitating a copper fine powder.

CONSTITUTION: At the time of electrolyzing the granular copper using the metallic copper as the anode in the sulfuric acid solution containing a Ti^{3+} ion, a Cu^{2+} ion eluted in the solution is reduced with a Ti^{3+} ion in the solution due to the reaction $Cu^{2+} + 2Ti^{3+} \rightarrow Cu + 2Ti[Ox]^{n+}$ and precipitated in the granular fine powder-state as the metallic copper. Then, the particle size of the obtd. copper powder can be adjusted with elution velocity of a Cu^{2+} ion, i.e., with current density in the anode and a Ti^{3+} ion concn. in the sulfuric acid solution.

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